BULDOZER
USER'S MANUAL

Official distributor

INTRODUCTORY REMARKS

The manufacturer guarantees the effective operation of the device, being in line with the Technical and Exploitation-related data provided in this documentation and user's guide. The device has been designed and produced by taking advantage of the highest quality materials and parts available on the market. The components of the machine comply with the applicable safety norms and have the required CE certification. Warranty period is equal to 1 year from the moment of purchase of the product. Warranty will be taken into account only after the provision of the device together with the valid documentation and the description of the fault of the product. The warranty card must have the type of device, its serial number, as well as the purchase date and the signature of the seller provided in order to be deemed valid. Any changes of the content of the warranty card or erasing some parts thereof will result in it being considered invalid. The warranty covers toll-free repairs connected with the replacement of spare parts. Damaged parts replaced by the service center representatives are considered the property of the manufacturer. The cost of transportation of the spare parts is covered by the Customer.

The warranty covers the following components of the device:

- Electronic parts,
- Displays,
- Mechanic and pneumatic modules,
- Detector,
- Wiring,
- Compressor,
- Solenoid valves,
- as well as all the technological faults fixing.

Warranty does not cover mechanical damages and those caused by improper operation, unskillful handling, natural disasters, and random accidents. Warranty does not cover the loss of profits connected with the malfunction of the device. The Customer accepts the terms of warranty and confirms the collection of a fault-free product.

.....

signature (stamp)

NOTIFICATIONS/LAUNCHING

Before the assembly of the machinery, the operator shall consult the documentation provided together with the product. It is also recommended to check the technical condition of the modules and electric systems (especially – the condition of wiring and auxiliary cables, plugs, switches, and sockets), grounding, and the condition of anti-fire and anti-shock protective modules. Additionally, the operator shall check the overcurrent protection systems (anti-shock, anti-overcurrent, and anti-overvoltage ones). It is also recommended to specify if the anti-fire notifications on devices and electric systems are fully legible. Before starting the operation, the operator is required to familiarize himself or herself with the guidelines concerning the functioning of the devices, safety measures, as well as the precautions provided in this user's manual.

A significant number of accidents at work is caused by neglecting or failing to comply with the basic work safety recommendations. Those accidents may be prevented by attempting to foresee the results of the operator's actions, as well as by strictly following the safety precautions. The said safety measures are enlisted in the "SAFETY" section of this manual and in the sections concerning the proper operation and maintenance of the device. Possibly risky situations are described in the "WARNINGS" section. It must be checked if the working conditions and the state of the product allow for safe operation of the device by the operator and third parties.

CHARACTERISTICS

The device in question is an interactive education and entertainment-oriented simulator for children. It had been designed with children aged 3-12 in mind. The device should be used by minors supervised by adults only. The digger/crane/bulldozer type device may be operated both indoors and outdoors (even during rain). The product is waterproof. Nevertheless, there are certain requirements that must be met for the device to be utilized outdoors. The ambient temperature must oscillate between +10° and +40°. Using the device in ambient temperature below +10° C or above +40° C may cause its damaging and warranty termination.

SAFETY

1. DO NOT TOUCH MOVEABLE PARTS

Under no circumstances should the operator situate hands, fingers, and other body parts in a close proximity to the moveable parts of the machine.

2. DO NOT LAUNCH THE DEVICE WITHOUT COVERS ON AND/OR OTHER COMPONENTS NOT ATTACHED.

The device should not be operated without all its components (e.g. covers, lids) being firmly in their place. If maintenance or servicing-related works require the said components to be removed, the operator must check if they have all been attached properly before operating the device.

3. DISCONNECT THE DEVICE BEFORE STARTING SERVICE-RELATED WORKS

While performing the maintenance and servicing-related undertakings, the device must be disconnected from the mains. Before performing any control, maintenance, cleaning, and part replacement-related procedures, the pressurized air container should also emptied.

4. AVOID ACCIDENTAL DISCONNECTIONS

5. DO NOT DAMAGE THE WIRING

Do not pull the main cable out to disconnect the device from the mains. Do not move the device which is connected to a power source. The wiring of the device should be secured against excessive heat, greases, and sharp edges. Cables should not be stepped on and no excessive weight should be placed on them directly. If any damages of the external layer of the wiring have been spotted, they must be fixed after disconnecting the device from the mains.

6. PERFORM MAINTENANCE-RELATED WORKS PROPERLY
The recommendations concerning proper lubrication and greasing of moveable parts, including steel components (joints, etc.) should be strictly followed.

7. EXTENSION CABLES FOR OUTDOOR USE
If the device is used outdoors, properly labeled and suitable extension cables should be used for this purpose. Cables with proper intersection and fuse-based protection installed should be chosen.

8. READINESS FOR OPERATION
The operator should not attempt to launch the device if he or she is exhausted, alcohol intoxicated, or if he or she is under the effect of drugs or other medications impairing his or her performance.

9. CHECK FOR DAMAGED PARTS AND LEAKS
Before starting the operation, the condition of the external covers and moveable parts should be checked, together with specifying the attachment reliability, presence of any leakages, and occurrence of the factors that may affect the performance of the device. All the damages should be properly fixed and the damaged parts should be replaced basing on the recommendations provided in this manual.

10. USE THE DEVICE ONLY FOR THE PURPOSES SPECIFIED IN THIS USER'S GUIDE
Do not utilize the device for the purposes that are not straightforwardly specified in this manual.

11. CHECK THE CONDITION OF SCREWS, JOINTS, AND COVERS
Check if all the screws, joints, and safety boards are properly attached to the device.
Check their condition on regular basis.

12. KEEP THE ENGINE FAN CLEAN
Engine ventilation grill should be always clean. In the case of excessive environment contamination identified, the grill should be regularly cleaned.

13. USE PROPER VOLTAGE ONLY
Operate the device only after applying the voltage specified in the nameplate. Improper voltage applied may result in damaging the compressor or engine.
Only cables with grounding modules should be used to connect the product in question to the mains.

14. DO NOT OPERATE DAMAGED DIGGER / CRANE / BULLDOZER TYPE DEVICE
If the device functions in a different manner than usual (excessive noise, vibrations, and disturbances alike), it should be immediately switched off and the servicing team should be contacted.

15. DO NOT CLEAN PLASTIC COMPONENTS WITH SOLVENTS
Solvents such as gasoline, diluter, petroleum gas, and other substances containing alcohol may damage the plastic parts of the product. They should be cleaned by means of a damp cloth soaked in soapy water or other cleaning agents.

16. USE ORIGINAL REPLACEMENTS ONLY
Utilization of non-original replacements may result in improper functioning of the product and warranty termination. Original parts may be purchased from the authorized dealer.

17. DO NOT MODIFY THE DEVICE
Do not attempt to modify the product. Such actions may results in posing threat to health and life of the operator having no required technical knowledge to apply the modifications. In the case of the necessity to apply any modifications, the servicing team should be contacted.

18. REMOVAL OF THE CONDENSATE FROM THE CONTAINER

a) While operating the device indoors that is – when it is used in enclosed areas with decreased air humidity, the container should be emptied once every 3 months.
b) While operating the device outdoors that is – when it is used in open areas or in increased air humidity conditions, the container should be emptied once every month.
- Removal of the condensate from the container should be made as follows. Remove the covers of the product and turn the air/condensate drain valve located under the air container. If needed, tilt the container to remove the excess of water stored therein.

- The said procedure may be also performed without the necessity to remove the covers. The hole at the back of the product makes it possible to access the drain valve. Removal of the condensate in compliance with the recommendations of this manual guarantees a proper functioning of the compressor. Failure to comply with the recommendations may result in damaging the compressor and warranty termination.

19. PNEUMATIC CIRCUIT

Use pipes and pneumatic components the pressure resistance of which is higher than the working pressure of the product.

WARNINGS

RECOMMENDATIONS CONCERNING DEVICE GROUNDING

Device must be properly grounded in order to ensure anti-shock protection. The compressor installed inside the device is a one-phase unit equipped with three-conductor cable and three-pin plug. It must be taken into account that the cable used for grounding is green or yellow and green. The green cable cannot be connected to a live socket. In the case of any problems occurrence, a professional electrician or the servicing team should be contacted.

EXTENSION CABLES

Only cables with three-pin grounded plug should be used. Avoid utilizing damaged or distorted cables. The operator must check if the condition of the extension cable is acceptable. While taking advantage of the said cables, its conductivity should be checked and adjusted to those required by the device. A cable with low capacitance may cause a voltage drop which may result in the permanent damaging of the compressor. One-phase compressor extension cable must have an intersection adjusted to its total length. NOTE! Cables with fuse protection modules only should not be utilized.

ELECTRIC SHOCKS

Any actions that may result in electric shocks must be by all means avoided. Device with damaged or distorted cables connected to it should not be operated. Regular inspection of electric cables should be performed. It is strictly forbidden to remove any covers, protective modules, or blocking the transmitters and switches of the device. Ad hoc fuse fixtures application and utilization of improper fuses is also not recommended. The operator should avoid replacing fuses when the device is connected to the mains. Do not pull the cord out in the attempt to deactivate the device. The plugs with damaged covers, protective modules, and distortions alike should not be used. Electric devices cannot be left unsupervised. Unauthorized individuals should not be allowed to access the device or its electric systems. In the case of the occurrence of any events not specified in this manual in a straightforward manner, the detailed DTR recommendations concerning electric/electronic machinery and devices, as well as anti-fire and anti-explosion protective measures should be consulted.

TRANSPORTATION

Digger/crane/bulldozer type devices should be transported in a careful manner. They should not be moved or lifted by means of hooks and lines. After shipment, it should be checked if the parts, accessories, covers, etc. are not loose. If so, they should be properly tightened or attached.

DEVICE OPERATION

Before the assembly, the operator is required to familiarize himself or herself with the „WARNINGS" section of this manual.

Note! In the case of some models of the product (those with the moveable cabin), blocking modules located underneath the product should be removed. The said blockades (wooden wedges) prevent the cabin from moving during transportation. They must be removed after shipping as the failure to do so will result in improper functioning of the product.

Before launching the device, it should be checked if the voltage of the power source is in line with the value provided in the nameplate (+/- 5% tolerance). The device can only be connected to the grounded AC 230 V 50 H socket. Only such a connection guarantees safe operation and functioning of the device. The power cord should be attached in such a way not to have a direct contact with water. The product is waterproof but it should not be installed or operated directly in the water. What is more, while using the products outdoors in the increased environment severity conditions, the operator shall inspect the condition of the device every time before turning the device on.

After the proper connection of the device, the external lights should go on. In some cases, the compressor may also be activated (then there will be an audible noise meaning that air is being sucked in to the container). The operator MUST NOT (!) intentionally switch the device on in such an event but rather wait for the product to turn off by itself by means of the installed pressure valve. (See: NOTE, point a). The device is equipped with a fully automatic compressor controlled by the pressure valve which stops the said component if the pressure in the container reaches the maximum value. Then, the compressor is turned on when the pressure falls below the minimum level of 2 bar (29 psi). After connecting the device to the power source, it should reach the maximum pressure level and then the operator should check if the machine works properly. The device has been set in accordance with the data provided in the appendix and is ready for operation right after the assembly. Modifications connected with the time/point/ticket disposal may be introduced basing on the motherboard adjustment manual (see: SETTINGS).

NOTE:

a) DO NOT turn off the device while the compressor is working as its operation is based on the feedback effect. Deactivation of the product may cause problems with engine launching, in result leading to overloading or damaging the electric circuit. The installed compressor is fully automatic and after the connection of the device to the power source, the product MUST NOT be turned off manually.

If such a deactivation occurs due to the circumstances being outside the control of the operator (power drop, power loss, fuse malfunction, etc.), before turning the device on again, the container should be emptied from the remaining air by means of the safety drain valve which is located on the air bottle located next to the pressure valve (metal linchpin – pull).

b) Device must be connected to the power source and protected by means of the residual-current device (magnetic and thermal). The engine installed in the device – the compressor, is equipped with an automatic thermal switch being the part of the circuit. The said switch turns off the component if the temperature of the compressor reaches maximal value. If the switch is fully automatic, the compressor will switch on again after 10-15 minutes.

c) The transducer/cylinder/transmission pipe may also reach high temperature levels and that is why proper care should be exercised while standing in a close proximity to them. Touching the said components may result in burns and other health hazards alike.

d) Compressor:
- Do not remove or loosen any connections with the container which is under pressure. Always check if the container has been emptied.
- Do not drill, weld, or in any other way deform the compressed air container.
- Do not attempt to perform any compressor-related undertakings if the said component has not been switched off
- Do not spray the device with water or highly flammable liquids.
- Do not operate the device if the power cord or plug is damaged. Contact the servicing team immediately in order for the said components to be replaced.
- Improper usage of the product or its utilization by unauthorized individuals may pose threat to health and lives of both people and animals.

SETTINGS

Motherboard and ticket dispenser settings.
Push and hold the MODE button. The set time will appear on the display. By means of the UP and DN buttons, set the desired value. Pushing the MODE button for a short period of time will result in exiting the programing mode. Holding the said button will result in activating the system parameter setting mode.
The procedure presented below should be followed:

1) "bo. 0" bonus function (0-off, 1-on), adding additional set time after 2nd and 5th impulse (bonus time). For example, if the initial time is equal to 1 min, and the time1 bonus (2nd impulse) is equal to 2 min, and 2nd bonus is equal to 3 min, then the following calculations will be made:
– after the 1st impulse 1 min (b1 – bonus time 1), (b2 bonus time 2)
– after the 2nd impulse 1 + 1 + 2 (b1) = 4 min
– after the 3rd impulse 1 + 1 + 1 + 2 (b1) = 5 min
– after the 4th impulse 1 + 1 + 1 + 1 + 2 (b1) = 6 min
– after the 5th impulse 1 + 1 + 1 + 1 + 1 + 2(b1) + 3(b2) = 10 min
2) "de. 0" demo function (0-off, 1- on), enabling notification generated every 3 minutes
3) "L.1 5" number of points added to the counter after blotting barrier no.1
4) "L.2.10" number of points added to the counter after blotting barrier no.2
5) "L.3.15" number of points added to the counter after blotting barrier no.3
6) "P..1. 5" channel 1 flashing interval
7) "P..2. 5" channel 2 flashing interval
8) "P..3. 5" channel 3 flashing interval
9) "P..4. 5" channel 4 flashing interval
10) "tc" – 0 . Ticket disposal depending on 0- score, 1-game time.
11) "b.10" number of points/time per 1 ticket
12) "Clr" after holding this button for at last 3 seconds, the maximum number of obtained points will be reset.

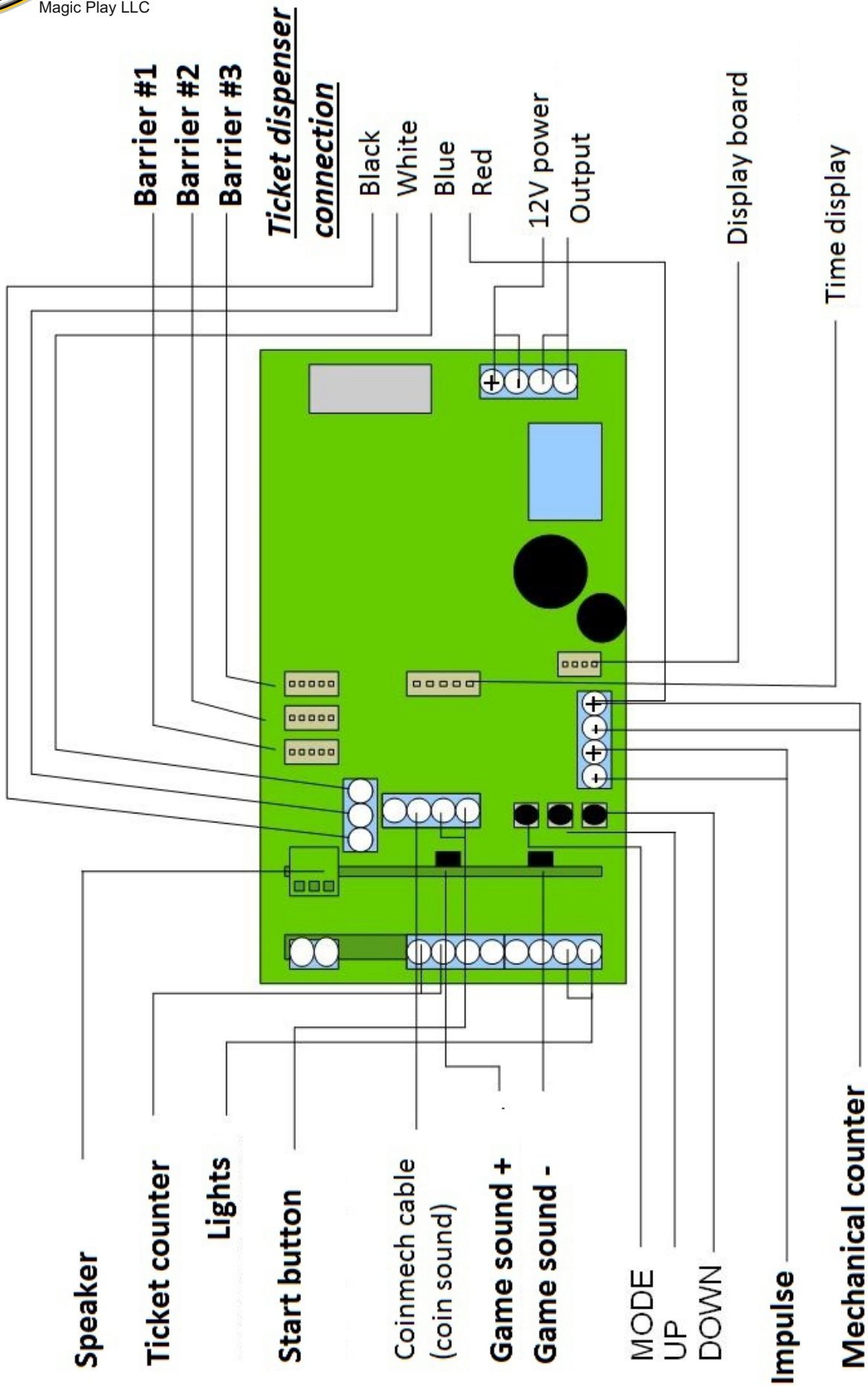
Pushing the MODE button for a short period of time results in exiting the programming menu and saving the introduced settings.

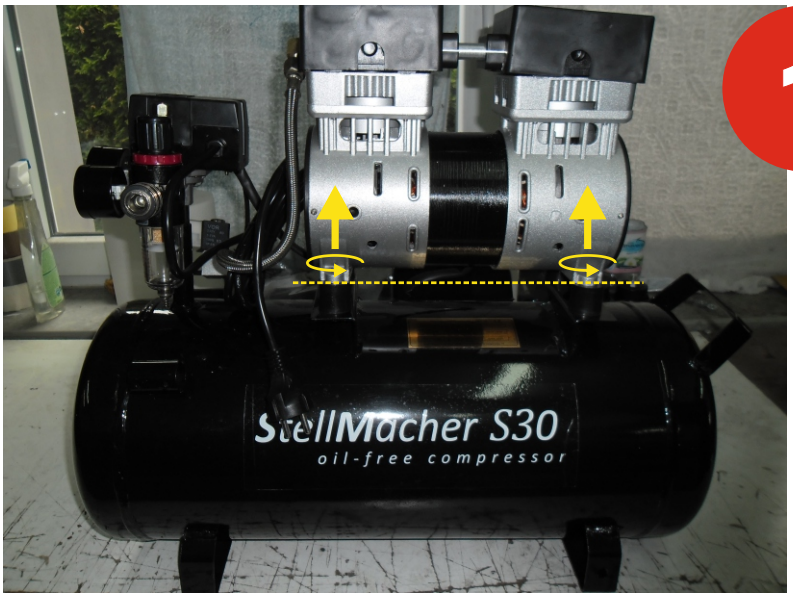
DEVICE MALFUNCTIONS

Air leakage
Air leakage may be caused by improper tightness of one of the quick coupler connectors. All the said components should be examined by soaking them in soapy water.

Inability to turn the compressor on
If there are problems with turning the compressor, the operator should check if:
- voltage of the power source is in line with the one specified in the nameplate
- power cord and extension cables have proper length and intersection
- ambient temperature is not too low (below 10°C)
- there are no disruptions in power transmission (plug is properly connected and thermal switch as well as fuses are intact)

IF NEEDED, THE COMPANY HOLDS RIGHT TO INTRODUCE THE REQUIRED MODIFICATIONS WITHOUT PRIOR NOTIFYING THE CUSTOMER ABOUT THE SAID FACT.


Barrier #1
Barrier #2
Barrier #3
Ticket dispenser connection
Black
White
Blue
Red
12V power
Output
Display board
Time display
Speaker
Ticket counter
Lights
Start button
Coinmech cable (coin sound)
Game sound +
Game sound -
MODE
UP
DOWN
Impulse
Mechanical counter

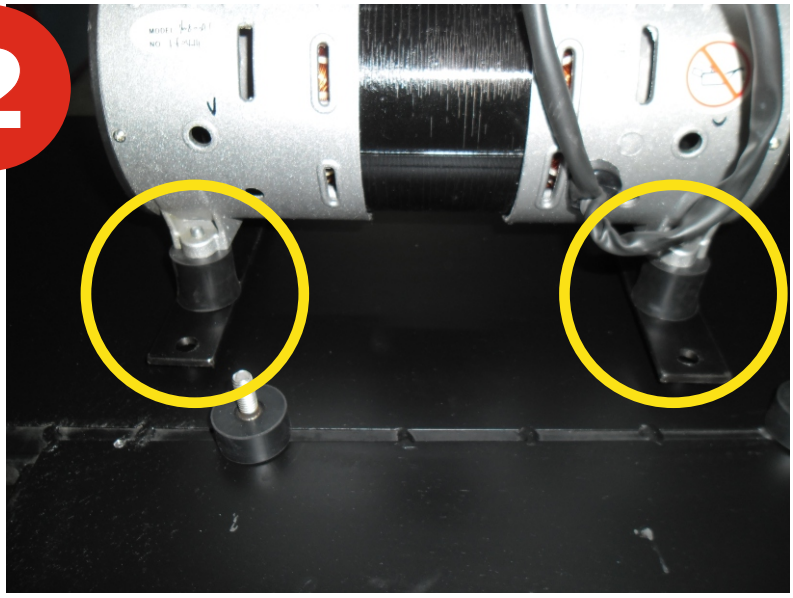


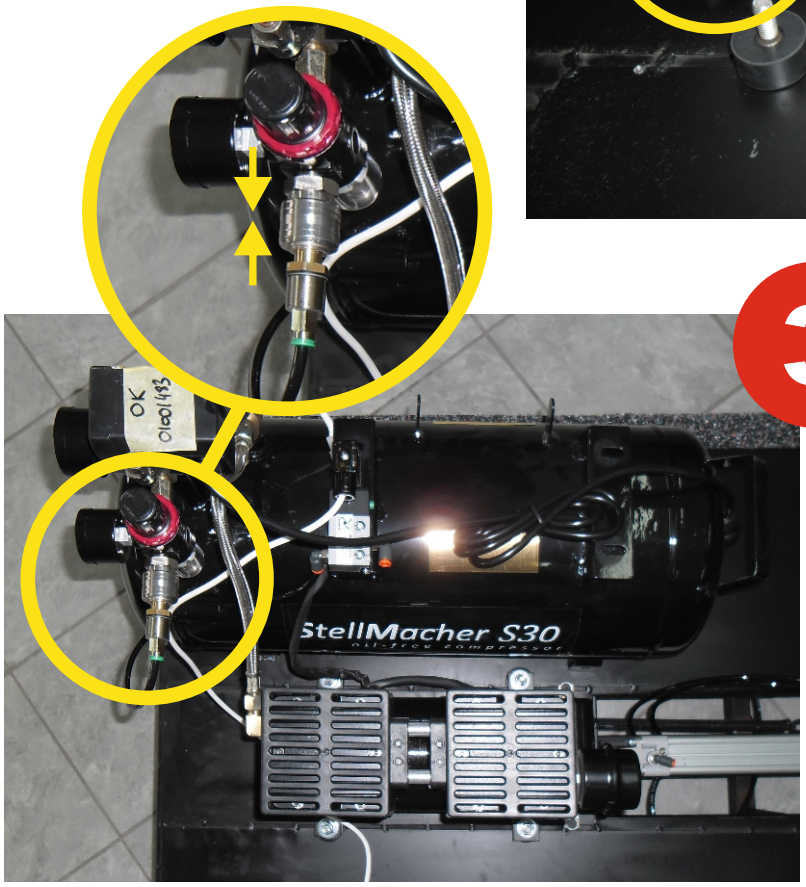
1

Remove the engine from the compressor cylinder. Signal cable between cylinder and the engine may require extension

Mount motor on metal strips with shock absorbers and fasten to the the mounting screws on the middle of the machine base plate

2





3

Bulldozer pneumatic system should be connected to a compressor using the quick coupling. Connect compressor to a power source

1

Unpack all the individual parts of the machine

2

Remove the screws from the lower front part of the bulldozer

3

Place the front panel to the machine. Arm base must pass through the hole in the panel.

4

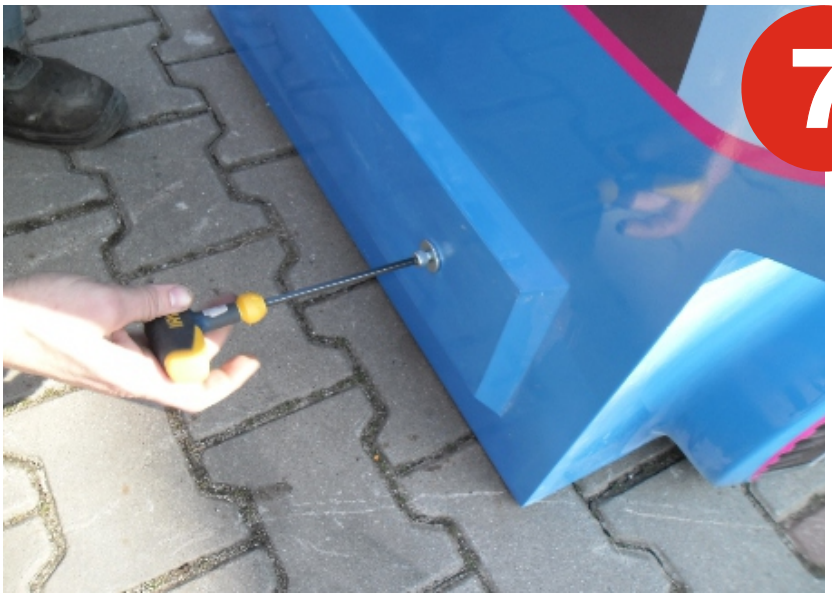
Screw the panel to the machine

5

Connect the front and right panel together

6

Connect the back and right panel together



7

Remove the screws from the ball counters base

8

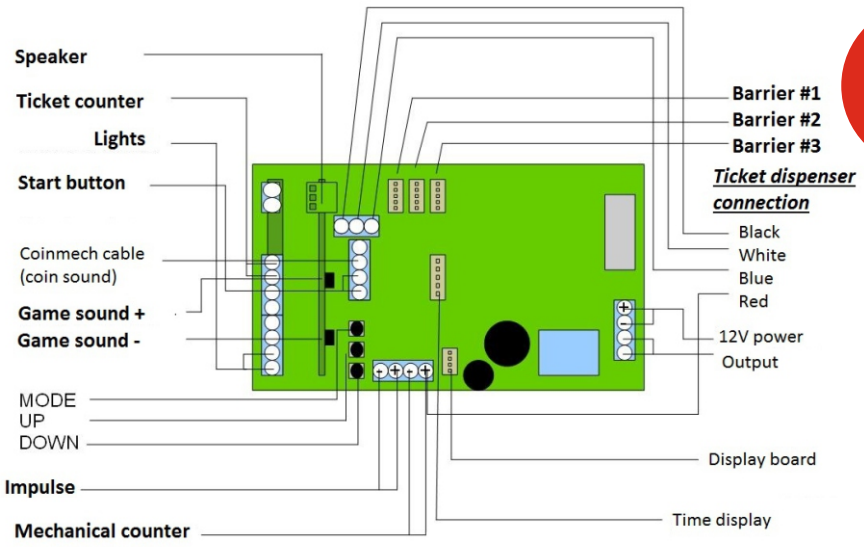
Connect back panel with ball counters base

9

Lead wires along the bottom edge of the right panel

10

Route the cables into the motherboard



11

Connect cables with „Barrier 1,2 and 3" connectors

12

Put the vertical arm on the arm base.

13

Screw vertical arm to the base. Remember to use pads under the screws

14

Screw middle arm together with vertical arm using Allen screw

15

Place the spreader between the vertical and the middle arm

16

Connect pneumatic acucator with the arm

17

Connect the pneumatic tubes together. Pay attention to tubes color and length

18

Connect the „scoop” and middle arm together

19

Connect pneumatic acucator with the „scoop”

20

Connect left panel to front and back pannels

21

Put balls into the container

22

Screw top panel with the container

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Weight	110-130kg
Height	150cm
Width	90cm
Lenght	280cm
Area	3m2
Power	220-240V
Power consumption	800W

Device name .....

Type/Model .....

Device number .....

Electronic's name .....

Compressor's name .....

Extras equipment .....

Buyer's name .....

Date of sell .....

Stamp and signature .....

Mileage warranty repairs

Filling date	Date of rapair	Description of rapair	Signature